



Clearwater Paper Corporation
601 West Riverside, Suite 1100
Spokane, WA 99201

May 28, 2019

(Via email to Brian Nickel)

U.S. EPA Region 10
Attn: Director, Office of Water and Watersheds
1200 Sixth Avenue, Suite 155 (OWW-191)
Seattle, Washington, 98101

Re: Comments on Draft Permit for Clearwater Paper Corporation (Permit Number ID0001163)

Dear Mr. Nickel,

Clearwater Paper Corporation (Clearwater) appreciates the effort EPA put into the draft Permit, Fact Sheet and supporting analysis and the opportunity to provide comments to the draft Permit. As outlined herein, Clearwater has concerns about various monitoring requirements and the effluent limits for pentachlorophenol and 2,3,7,8 TCDD in the draft Permit. Finally, Clearwater requests that EPA delay finalizing the Permit considering key regulatory developments that may impact the significant provisions in the Permit. Our specific comments on these topics follow.

A. PCB Effluent and River Monitoring

Table 1 of the draft Permit and Part 1.B.12 requires monitoring of the effluent for PCBs twice per year, utilizing EPA Method 1668C for analysis of PCB congeners. As recognized in the Fact Sheet, Method 1668C is an unapproved EPA method. Such monitoring is a new requirement based on a 303(d) listing for PCBs based on fish samples in Washington, downstream of the discharge. Clearwater requests that Method 1668C monitoring be removed from the final Permit for the reasons set forth below.

- 1. Clearwater should not be singled out for PCB monitoring.** There is no justification to single out Clearwater Paper's Mill for this type of monitoring. Previous monitoring data of the effluent (most recently in 2009) have not detected the presence of any PCB compounds (Columbia Analytical Services 2009). Clearwater Paper has never been involved in processes associated with the generation of PCBs. Similarly, the Fact Sheet (Section VI.B.; pg. 30) acknowledges that PCBs are not generated at chlorine-free mills like Clearwater's. Nevertheless, the Fact Sheet speculates that Clearwater may be generating PCBs.

The studies referenced in the Fact Sheet do not justify PCB monitoring. The IEPCO study relied upon in the Fact Sheet concluded that the major source of PCBs in IEPCO's wastewater was from processing of recycled paper on site (from the ink in the recycled paper). Since Clearwater does not process recycled paper on site, reliance upon the IEPCO study for the claim in the Fact Sheet that Clearwater may be inadvertently generating PCBs is erroneous and does not provide a basis to require 1668C monitoring in Clearwater's final Permit. Also, contrary to the Fact Sheet, Clearwater manufactures only virgin pulp on site and is aware of all purchased pulp suppliers.

Similarly, reference to the Rantio paper to support PCB monitoring is misplaced. The Rantio paper concludes that PCB residues were not significantly formed or leached from the studied pulp mills. The authors note that "the observed low levels detected indicate that there is no significant source of PCBs . . . in processes of the pulp mills. Instead the contaminants detected could originate from the raw materials used in the mill." (The raw materials being wood and water). Thus, the Rantio paper does not support EPA's justification to include PCB monitoring at Clearwater's facility, particularly since PCBs have never been detected in Clearwater's effluent.

Finally, the alternative justification provided in the Fact Sheet for requiring 1668C monitoring is again speculative and is based on a study in the Puget Sound in Washington which found that stormwater runoff from watersheds containing industrial and commercial areas had generally higher concentrations of PCB congeners than other areas monitored. Since Clearwater may discharge minimal stormwater from Outfall 001, the Fact Sheet implies that this supposedly provides an independent basis to require 1668C monitoring. Again, that is highly speculative and not supportable. The Puget Sound Study relied upon did not identify any commercial or industrial facility that was contributing higher levels of PCBs to stormwater, let alone any chlorine-free mills like Clearwater's. Thus, simply because Clearwater is an industrial facility does not warrant 1668C monitoring, particularly because the facility is in Lewiston, Idaho where according to EPA "the volume of stormwater is minimal." See Biological Evaluation for NPDES Permit No. ID0001163 (EPA March 2019). We are unaware of any industrial facility in Idaho or Washington that is required to monitor for PCBs in stormwater utilizing Method 1668C. Clearwater should not be singled out for such monitoring simply because it is an industry that may discharge minimal stormwater.

Several municipalities that discharge to the Clearwater and Snake rivers recently received a NPDES Permit from EPA. In all such permits, there are no requirements to conduct River and effluent monitoring using Method 1668C. The Washington Department of Ecology wastewater permits issued to the City of Clarkston (approximately 2 miles downstream on the Snake River) and City of Asotin (approximately 6 miles upstream of the confluence on the Snake River as well as other industrial stormwater discharges to the Snake River in Washington) do not contain PCB monitoring requirements either. Again, it appears that Clearwater's mill is being unjustifiably singled out for PCB monitoring absent any legitimate justification and therefore PCB monitoring should be removed from the final Permit.

2. **Fish Tissue Data in the Lower Snake River does not justify Method 1668C Monitoring.** EPA justifies PCB monitoring using Method 1668C in the draft Permit and Fact Sheet based on an implied connection between Clearwater's discharge and fish tissue data downstream.

No such connection has been demonstrated in the record to justify PCB monitoring in the draft Permit. The monitoring location with the nearest proximity to the Clearwater mill's discharge cited in the Seiders, 2011 publication is the Clarkston monitoring site location at river mile 130-135. This is the most appropriate location to review for assessment of stream conditions in the vicinity of the mill, which is located at river mile 140. The next nearest monitoring location (Lower Granite Dam) is about 35 miles downstream of the mill.

In 2004, at the Clarkston location, three composite samples were collected from three fish species. Of the three species assessed (mountain whitefish, largemouth bass, and peamouth) the mountain white fish and the peamouth exceeded the fish tissue criterion for PCBs. In 2009, at the same Clarkston location 11 composite samples were collected from five fish species. Of the five species assessed (common carp, largemouth bass, smallmouth bass, bluegill, and pumpkinseed), only one sample of one species (common carp with only one sample collected) exceeded the allowable fish tissue concentration. The remaining 10 samples from four fish species had concentrations below the allowable tissue concentration.

It should be noted, that the most recent tissue data for PCBs collected and considered in developing the discharge permit as cited by Seiders, 2011 are 10 and 15 years old respectively. Department of Ecology Water Quality Policy (Water Quality Policy 1-11) stipulates that the age of data needs to be considered in evaluating water quality. "Ecology will consolidate readily available data and information collected within the period (aka data window) specified by a published call-for-data (typically ten years)..." Additionally Department of Ecology states in the policy, "Generally, Ecology will not assess data older than ten years for a given cycle..." Considering the greater than 10-year age of the data cited and utilized in writing the draft discharge permit and associated Fact Sheet, these data cannot reasonably be considered representative of the current conditions of the receiving water.

Moreover, the Fact Sheet erroneously concludes: "there was not a statistically significant change in the concentration of PCBs in comparable fish tissue samples (i.e., the same species, analytes, and seasons of collections)", and "even though the most recent PCB fish tissue data available were collected in 2009, it is likely that concentration of PCBs in fish tissue still exceeds the concentration equivalent to the water quality criterion."

The species sampled on the Snake River immediately downstream of the mill and tissue concentrations measured during each of the two sampling events are not comparable because similar species were not analyzed, and statements regarding trends are unsubstantiated. Only one species (largemouth bass) of the seven total species assessed in the data collection efforts were collected during both sampling events. Considering just the consistently collected species, it is notable that no largemouth bass samples exceeded the PCB criterion and three of the four results were below detection limits. Given the limited quantity of intraspecies comparable data at this monitoring location, it is plausible that the fish tissue conditions improved from 2004 to 2009 given that 67 percent of the samples analyzed in 2004 exceeded the allowable tissue concentration whereas less than 10 percent of the samples exceeded the allowable concentration in 2009. Contrary to US EPA statement in the Fact Sheet, it is certainly possible that fish tissue concentrations at the Clarkston sampling location have declined to levels that are below the allowable concentration of 5.3 ppb.

The Fact Sheet erroneously concludes: “*Thus, the concentration of PCBs in fish tissue collected from the Snake River in WRIA 35 between 1998 and 2009 consistently exceeded 5.3 ppb...*”

That statement is not supported by total PCB tissue data presented in the Biological Evaluation. Most of the samples of species that feed on organisms in the water column (e.g., smallmouth bass, bluegills, pumpkinseeds, largemouth bass and yellow perch) have concentrations less than 5.3 ppb. Based on the 2004-2009 fish tissue data presented in the Biological Evaluation, the average concentration of total PCBs in each of these species in the Snake River downstream of the mill was less than 5.3 ppb (Table 1). Thus, it is incorrect for the Fact Sheet to state that total PCBs concentrations in fish in the Snake River “consistently exceeded 5.3 ppb”. For pelagic species, the opposite is true, total PCB concentration is consistently below 5.3 ppb.

On a related issue, the Fact Sheet states that the 5.3 ppb fish issue concentration is: “...*equivalent*” to the PCB water quality criterion that had been effect in the State of Washington during that time (179 pg/L) ...” Fact Sheet, p. 30.

On the same page the Fact Sheet goes on to state: “*In November 2016, EPA promulgated a new PCB water quality criterion of 7 pg/L for Washington...equivalent to 0.2 ppb in fish tissue*” (emphasis added). (See Section E for the May 2019 Washington Rule Decision)

The available fish tissue data provide no basis for concluding that a simple linear relationship exists between the concentration of total PCBs in the water column and in fish tissue that can be used to extrapolate a fish tissue concentration that is “equivalent” to a water concentration. In fact, the data suggest a far more complex relationship between the concentration of total PCBs in the water column and in fish tissue. The absence of a simple linear relationship between the concentration of total PCBs in the water column and fish tissue invalidates EPA’s assumption and use of such a relationship to predict exceedance of a surface water quality criterion based on measured fish tissue data.

Clear evidence of the absence of the simple relationship between fish tissue and water column concentrations is provided by comparing total PCB tissue concentrations across different fish species from a given sampling location. Because the water column concentration at a given sampling location is similar for all fish species at that location, if a simple linear relationship could be used to predict the fish tissue concentration, the concentration in fish tissue would be similar in all fish and fish species collected and analyzed at a given sampling location. That is not even remotely the case. At the sampling station immediately downstream of the mill, sunfish (bluegill and pumpkinseed) have a total PCB concentration that is 10 times lower than the concentration measured in peamouth, 38 times lower than the concentration measured in carp, and 50 times lower than the concentration measured in mountain white fish (Table 1).

Similar large (and, in some cases, larger) differences in total PCB concentration between species are observed in most every other downstream sampling location. The existence of such large differences in concentration of total PCBs in fish tissue in the absence of a difference in water column concentration indicates that a simple linear relationship cannot be used to translate measured fish tissue concentrations into water column concentrations.

Additionally, the tissue data collected in various fish species between 2004 and 2009 in the Snake River and summarized in the Biological Evaluation suggest total PCBs in fish tissue

may be associated with sources of PCBs other than the concentration of PCBs in the water column. In fact, the total PCB data presented in the Biological Evaluation indicate the total PCBs are 10 times higher (or more) in bottom feeding species than in species that feed primarily in the water column (Table 1). Those data suggest that PCBs in sediment, and not PCBs in the water column, may be a dominant exposure pathway and source of PCBs to fish.

In summary, the absence of a relationship between fish tissue and the water column downstream of Clearwater's discharge precludes using water column concentrations predicted from fish tissue as a basis for requiring monitoring of PCBs in Clearwater's effluent.

3. **Use of Method 1668C (an unapproved EPA sampling method) is not appropriate.** In addition to there being no factual or technical justification to single out Clearwater for PCB monitoring, any data collected utilizing Method 1668C is of questionable value. As acknowledged in the Fact Sheet, Method 1668C is not an EPA approved method under 40 CFR Part 136. Therefore, it should not be included in Clearwater's permit. EPA deferred approval of Method 1668C because there were (and are) substantial questions raised about the Method's reliability. As recently point out by the Supreme Court of Washington in *Puget Soundkeeper v. Department of Ecology*, 424 P.3d 1173 (Wash. 2018): "Method 1668C is unreliable because that test does not allow Ecology to determine whether any of the PCBs detected comes from the discharges, the test container itself or the ambient air. This means that the test would detect the presence of PCBs but would not identify the source." *Id.* at 1178. The same problems identified in *Puget Soundkeeper*, *supra* apply to Clearwater's discharge.

The frequency of false positives from Method 1668C is well documented and therefore any results obtained from such monitoring would be of questionable value. To illustrate one of the many problems with 1668C, it is noteworthy that blanks common to the application of PCB methods, particularly 1668, include "sampling blanks," "trip blanks," and "laboratory blanks." Because of the ubiquity of PCBs in the environment, PCB congeners are commonly present in these blanks; therefore, differentiating native sample contributions from blank contributions can be challenging.

Despite the documented problems with use of Method 1668C, EPA nevertheless proposes its use in the Fact Sheet by selectively quoting from the Federal Register notice deferring approval of Method 1668C. The reference in the notice to continued use of Method 1668C in "regulatory programs" clearly was referencing non-Clean Water Act programs. EPA made this statement because it recognized that other state agencies and federal programs had been using Method 1668C for cleanups and the deferral did not want to call into question that work. EPA never stated in the Federal Register notice that EPA permit-writers could use Method 1668C in NPDES permits because such a practice would be contrary to 40 CFR 122.44(i)(1)(iv). In fact, if EPA intended to include Method 1668C in NPDES Permits, there was no point to the deferral or for that matter, approving any other methods under 40 CFR Part 136. Allowing EPA to require monitoring using methods not approved under Part 136 is not consistent with the federal rule, which requires the use of EPA approved monitoring methods to be included in NPDES Permits.

Finally, EPA's statement in the Fact Sheet that the results of 1668C monitoring will be used to conduct reasonable potential analyses in the future is premature and speculative. IDEQ, and not EPA, will be responsible for determining future reasonable potential analyses and determining which data should be relied upon in conducting such analyses. Assuming Method 1668C is still not an approved method, it is highly questionable whether such data could be used in a reasonable potential analysis, and if it was so used, it would likely be subject to legal challenge. Also, it makes little sense to rely upon a monitoring methodology as a sole basis to establish future permit limits, when the same method could not be used for future compliance monitoring. Until Method 1668C is an approved EPA method, it should not be required as a permit condition and it cannot be used as a basis to set permit limits as suggested in the Fact Sheet. Therefore, Clearwater requests that PCB monitoring be removed from Table 1.

For the same reasons as discussed above, PCB river monitoring using Method 1668C should be removed from Part I.G. of the Permit as the Method is unreliable and upstream and downstream PCB monitoring data utilizing Method 1668C in the states of Idaho and Washington will not yield any meaningful results, due to the ubiquity of PCB congeners in the environment, and the likelihood of upstream and downstream sample results being virtually identical.

However, Clearwater is cognizant of the need of Idaho and Washington agencies for additional PCB monitoring in the area of the discharge. Therefore, in lieu of requiring Method 1668C monitoring, Clearwater would propose development of a monitoring plan to be approved by the permitting agency.

B. River Monitoring

1. **Chlorophyll-a Monitoring.** Part I.6. of the draft Permit requires chlorophyll-a, soluble reactive phosphorous; total phosphorous and total nitrogen river monitoring on a quarterly basis. Clearwater believes that there is no justification in the record for this monitoring and requests it be taken out of the Permit. The Fact Sheet states: *Receiving water monitoring for nitrogen, phosphorus, chlorophyll a, pH, temperature, and dissolved oxygen is required to assess the discharge's effect upon nutrients and response variables in the receiving water. Receiving water samples for chlorophyll-a and pH must be taken from the photic zone, because phytoplankton productivity can influence those parameters, and healthy phytoplankton will be found in the photic zone.*

Nutrients contained in Clearwater Paper's discharge cannot reasonably be expected to generate algal growth in the water column by the time the discharge reaches the proposed downstream monitoring locations. Furthermore, there is no EPA-approved analytical method for chlorophyll-a. The NPDES Fact Sheet does not provide a substantive rationale for why chlorophyll-a is required. Clearwater Paper requests that all receiving water monitoring for chlorophyll-a be removed from the permit.

2. **pH River Monitoring.** The Fact Sheet attempts to justify pH monitoring in the river by stating: *Receiving water monitoring for nitrogen, phosphorus, chlorophyll a, pH,*

temperature, and dissolved oxygen is required to assess the discharge's effect upon nutrients and response variables in the receiving water. Receiving water samples for chlorophyll-a and pH must be taken from the photic zone, because phytoplankton productivity can influence those parameters, and healthy phytoplankton will be found in the photic zone.

EPA performed an effluent limit calculation for pH. This calculation determined that there was no reasonable potential to contribute to an excursion above Idaho's pH standard. The draft NPDES permit proposes to collect upstream pH samples in the Clearwater River and Snake River and Downstream samples in the Snake River. All three sample locations are located within Idaho. Given the fact that there is no reasonable potential to contribute to an excursion in Idaho, Clearwater Paper requests that all receiving water monitoring for pH be removed from the permit. Clearwater Paper continuously monitors effluent pH and is already being restricted to a new permit limit pH range of 5.7 to 8.5. This is a more restrictive permit limit than the current permit of 5.5 to 9.0 and it ensures that Clearwater Paper will comply with the Idaho and Washington water quality standards.

3. **Total Nitrogen, Total Phosphorous, and Soluble Reactive Phosphorous.** Further, the draft Fact Sheet does not provide a reason for monitoring phosphorus and soluble reactive phosphorus. Therefore, Clearwater Paper requests that all receiving water monitoring for total phosphorus and soluble reactive phosphorus be removed from the permit.

On page 31, the following justification is provided for why Total Nitrogen should be required in the permit: *"Total nitrogen monitoring is necessary to determine the impact of the nutrients in the discharge upon water quality."*

Clearwater Paper's discharge cannot reasonably be expected to impact total nitrogen downstream of its discharge. Over the past several years, Clearwater Paper has collected more than 100 effluent samples for total nitrogen. The average concentration reported in Table 9 of the draft fact sheet is 0.067 mg/L. To put this concentration into context, the EPA drinking water standard is 10 mg/L. Furthermore, when the reasonable potential analysis was completed for total nitrogen in Appendix D of the draft fact sheet, there was no reasonable potential to exceed the water quality criteria. This analysis determined that the worst-case concentration would be less than 0.3% of the applicable water quality criteria. Clearwater Paper requests that all receiving water monitoring for total nitrogen be removed from the permit.

4. **Dissolved Oxygen and Temperature Monitoring in the Rivers.** Table 17 of the draft fact sheet proposes to require continuous dissolved oxygen and temperature monitoring at three different monitoring locations in the Clearwater and Snake rivers. EPA is proposing to have Clearwater Paper continuously monitor temperatures and dissolved oxygen near the deepest part of the rivers and at three different depths (surface, mid-depth, and bottom). This permit condition is impracticable given the fact that Clearwater Paper does not have the authority to shut down the river to prevent boat and barge traffic. This type of sampling is very expensive and is estimated to cost over \$200,000 to complete. The Snake River--Anatone and Clearwater River--Spalding USGS Stations records daily river temperatures. Clearwater Paper also has an effluent limit for temperature. Furthermore, it appears that

EPA has ignored the temperature and dissolved oxygen data that Clearwater Paper submitted to EPA in January 2007. Please refer to the report titled Potlatch 2006 Endangered Species Act Annual Monitoring Report – NPDES ID0001163. Four months of weekly dissolved oxygen data collected at seven different monitoring locations demonstrated that Clearwater Paper is clearly not affecting dissolved oxygen downstream of its discharge. The report submitted in January 2007 also provides several more reasons why Total Nitrogen, Total Phosphorus, Soluble Reactive Phosphorus, pH, and Chlorophyll-a monitoring is unnecessary. Clearwater Paper requests that all receiving water monitoring for nutrients, dissolved oxygen, and temperature be removed from the permit.

C. Reasonable Potential Analysis

Clearwater believes EPA did not utilize correct data in the reasonable potential analysis for Pentachlorophenol and for 2,3,7,8 TCDD, as set forth below.

1. **Pentachlorophenol (Penta) effluent limits.** The draft Permit proposes a new seasonal permit limit for Penta. The rationale for this limit is based on EPA's conclusion that Clearwater's discharge has the reasonable potential to exceed the state of Washington's human health criteria for Penta downstream of the outfall in the Snake River. There is no data to support this Penta limit.

Based on over fifteen years of data collected by Clearwater at its bleach lines, there has never been a detection of Penta being discharged into Clearwater's wastewater system. The Penta detection limit is 0.23 µg/L. Moreover, there is no data in the record to suggest that there is any Penta in the Snake River in the state of Washington. Absent any data, EPA instead relied upon the fact that Clearwater's current permit establishes a technology-based effluent limit of 5 µg/L for Penta in the bleach lines. Despite fifteen years of data showing non-detect Penta discharges from the bleach lines, EPA nevertheless assumed that Clearwater continually discharges 5 µg/L Penta from the bleach lines in order to justify its conclusion that Clearwater's discharge had the reasonable potential to exceed Washington's water quality standards.¹ In other words, EPA did not consider all the available data to support its reasonable potential analysis. This is contrary to EPA rules, guidance and case law interpreting the scope of EPA's authority to establish water quality-based effluent limits.

It is well established that EPA is required to use all relevant available data, including facility-specific effluent monitoring data in determining the need for water quality-based effluent limits. See *American Iron & Steel Institute v. EPA*, 115 F.3d 979 (D.C. Cir. 1997). See also, *In re Washington Aqueduct Water Supply Sys.*, 11 E.A.D. 565 (EAB 2004). EPA's reasonable potential analysis rule at 40 CFR 122.44(d) requires EPA to consider the variability of the pollutant in the effluent in determining whether there is a reasonable potential to exceed a water quality standard. Similarly, *the EPA Technical Support Document for Water Quality-Based Toxics Control* (EPA 1991) directs the permit writer to

¹ This approach has regulatory consequences elsewhere in the record in so far as EPA concluded in its Biological Evaluation that discharges of Penta at these same levels are likely to adversely affect endangered species.

“use any available data from previous monitoring” in determining the need for a water quality-based effluent limit. See TSD at Section 3.3.1.

Rather than rely upon available effluent monitoring data as proscribed by the law and EPA guidance, EPA ignored the data and instead relied upon a technology-based effluent limit that is meaningless in light of fifteen years of data demonstrating that Clearwater’s discharge does not contain Penta at the levels assumed in the reasonable potential analysis. There is no support for such an approach. It is important to note that EPA’s development of the technology-based Effluent Limitations Guidelines for bleach lines focused on 12 tri-tetra, and penta-chlorophenols. Their selection of guideline values (non-detect for all of these in bleach plant effluents) were predicated on the use of ECF bleaching. The dataset EPA relied upon showed that some tri-, tetra- and pentachlorophenol could be generated when chlorine was used for bleaching but not under conditions of ECF bleaching. Since Clearwater’s facility is chlorine-free, there is no factual support for assuming that the bleach lines might be discharging Penta at the technology-based levels used in the reasonable potential analysis.

Clearwater acknowledges that EPA administrative decisions provide support for the general proposition that a “precautionary approach” is appropriate when conducting a reasonable potential analysis under certain circumstances. See *In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577 (EAB 2010). (Finding a reasonable potential to exceed a downstream state’s nutrient criteria when the downstream state’s water is impaired by nutrients and the permittee is discharging significant volumes of the nutrient); *In re Washington Aqueduct Water Supply Sys.*, 11 E.A.D. 565, 584 (EAB 2004) (EPA’s reasonable potential analysis is remanded because the agency did not consider other available monitoring data demonstrating the need for water quality-based effluent limits) and, *American Iron & Steel Inst. v. EPA*, *supra* (when considering available data and the variability of pollutants in the discharge it is appropriate for EPA to consider a worst-case estimate of effluent conditions in conducting a reasonable potential analysis).

However, this precautionary approach has never been extended to the situation here, in which there is no data to support the reasonable potential analysis. Particularly when there is a robust data set that contradicts this precautionary estimate of the effluent and the river conditions. By ignoring all the available data, EPA’s reasonable potential analysis for Penta is not supportable. Accordingly, Clearwater requests that EPA remove the Penta limits from Table 1 in the final Permit.

2. If EPA decides to reevaluate its reasonable potential analysis for Penta, Clearwater urges EPA to apply actual data and appropriate analyses. For example, since all the bleach lines data have been non-detect for Penta, the reasonable potential analysis should use a discharge of less than 0.23 µg/L from the bleach lines. Similarly, since all the data has uniformly shown non-detect for Penta, the coefficient of variability (CV) of 0.6 used in EPA’s prior reasonable potential analysis is overly conservative. In any future reasonable potential analysis for Penta, the CV should be zero or close to zero. Finally, EPA utilized an inappropriately conservative mixing zone for Penta. Penta is a human health criteria based on a lifetime exposure. That is why both Idaho and Washington standards stipulate that long-term harmonic mean flows are utilized to establish compliance with the criteria. See IDAPA 58.01.02.210.03.d.ii (recently approved by EPA) and 40 CFR 131.45(c)(2) ii (Washington). Therefore, the seasonal harmonic mean flows used by EPA to establish the

Penta limits in the draft Permit are not appropriate. The Clearwater comments to IDEQ on a more appropriate human health criteria mixing zone are attached to this letter. (See *Section E for the May 2019 Washington Rule Decision*)

3. **2,3,7,8 TCDD Effluent Limits.** EPA's reasonable potential analysis appears to be based on similar approach as the Penta analysis. All data submitted to EPA by Clearwater for over ten years have been non-detect. Thus, we are not certain what the basis for the TCDD concentration utilized in the reasonable potential analysis as it is not explained in the record. As noted in the comments on the Penta limit, EPA is obligated to use actual data in conducting a reasonable potential analysis and all the data demonstrates non-detect for 2,3,7,8 TCDD. Also, absent from the record is any basis for the CV utilized by EPA, but it does not appear to be based on Clearwater's effluent data.

Finally, it appears that the 2,3,7,8 TCDD limit revises the waste load allocation Clearwater had in the Columbia River Dioxin TMDL without any accompanying revision to the TMDL. This is contrary to EPA rules that require permit limits to be "consistent with the assumptions and requirements of any approved TMDL." See 40 CFR § 122.44(d)(vii)(B).

Accordingly, EPA should keep the existing 2,3,7,8 TCDD effluent limits in the final Permit or explain how unilaterally changing the allocation for one mill is consistent with the assumptions and requirements of the previously approved TMDL. Further, EPA should rely upon the actual data collected by Clearwater for the past ten years, utilize a supportable CV and utilize the correct harmonic mean flows (and not seasonal limits) in revising any 2,3,7,8 TCDD effluent limits. (See *Section E for the May 2019 Washington Rule Decision*)

D. Miscellaneous Comments to the Draft Permit

1. **Mercury Monitoring.** The draft Permit requires mercury monitoring in the effluent, intake water and receiving water. Clearwater's Permit previously required mercury monitoring. Clearwater never had a detect for mercury, therefore mercury monitoring was removed from the current Permit. There is no justification in the record to again require mercury monitoring in the Permit. Therefore, Clearwater requests that mercury monitoring be removed from Parts I.A., I.F., and I.G. in the Permit.
2. **Written Log.** Condition I.B.3.b) of the draft Permit states that the permittee must maintain a "written log." Clearwater Paper requests that the word "written" be removed. While Clearwater Paper may maintain a written log, an electronic log or other form of log should be allowed.
3. **WET Testing.** In condition I.C.1. of the draft Permit related to WET testing, Clearwater requests that the last 3 sentences of this permit condition be removed. There is no basis explained in the Fact Sheet about why it is necessary to collect split samples for all the chemical and physical parameters in Part I.B. Part I.B has so many different sampling frequencies that it would be very difficult to collect a large volume of effluent to split between 1/week, 3/week, monthly, quarterly, and continuous frequencies with twice per years sampling that changes every year. Clearwater Paper requests that this permit

condition only state the following: "Toxicity testing must be conducted on 24-hour composite samples of effluent."

4. **TRE Work Plan.** In condition I.C.6. of the draft Permit, Clearwater requests 180 days to develop a TRE work plan rather than 90 days. This request is consistent with a recently issued permit by EPA to the City of Lewiston in 2016.
5. **Chemical List.** In condition I.C.6.b) of the draft Permit, Clearwater requests that this permit condition be removed. It is unreasonable to develop a list of all chemicals used in operation of the facility and the requirements to describe maximizing in-house treatment efficiency and good housekeeping practices is ambiguous.
6. **IDEQ Reference.** Since IDEQ will have primacy of the wastewater program effective July 1, 2019, and the final Permit will not likely go into effect until after July 1, please note in the final permit that IDEQ is the permitting agency and that all reports, notices and other correspondence be directed to IDEQ.
7. **Sampling Frequency.** In condition I.E. of the draft Permit, based on years of historical data, EPA recognized that it was more appropriate to have a BOD and COD effluent sampling frequency of 3/week rather than daily. This same rationale should be applied to permit condition I.E. Clearwater requests that the requirement to conduct daily monitoring be changed to 3/week.
8. **Quality Assurance Plan (QAP).** In condition II.A. of the draft Permit, Clearwater requests 180 days to develop a QAP rather than 90 days. There are several additional sampling frequencies and parameter monitoring requirements that were not in the previous permit. This request is consistent with a recently issued permit by EPA to the City of Lewiston in 2016.
9. **Project References.** In condition II.B.n) of the draft Permit, Clearwater requests that this condition be removed. These three projects were completed during the last permit cycle, which was more than 10 years ago.

E. Request EPA Hold on Issuance of the Final Permit

It appears that several regulatory developments have occurred since issuance of the draft Permit that will or could require a substantial re-write of key permit terms. Accordingly, Clearwater requests that EPA hold on final issuance of the Permit until there is more certainty surrounding these developments.

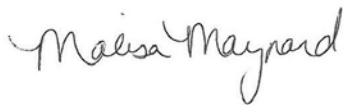
First, EPA recently published an Interpretative Statement that discharges to ground water are exempt from regulation under the NPDES Permit process. See *Application of the Clean Water Act National Pollutant Discharge Elimination System Program to Releases of Pollutants from a Point Source to Groundwater* (April 15, 2019). Clearwater acknowledges that due to conflicting federal court decisions, the effect of the Interpretative Statement in Idaho may be in question. We also understand that the U.S. Supreme Court will likely resolve the conflicting federal case law on the topic in the next year. Since Clearwater's draft Permit currently regulates discharges to ground water from the ASB, the appropriateness of ASB ground water discharge limits in the draft Permit are in question. If the Supreme Court upholds EPA's Interpretative Statement, then substantial portions of the Permit will need to be revised since the ASB limits impact other permit limits from Outfall 001. Therefore, Clearwater requests EPA to hold issuance of the final Permit until the issue of the legality of regulating discharges to ground water under the NPDES Permit program is resolved by the U.S. Supreme Court.

Secondly, the underlying water quality standards applicable to Clearwater's draft Permit have changed since issuance of the draft Permit. EPA approved Idaho's new and revised human health water quality criteria on April 4, 2019. Clearwater's Permit will likely be the first permit subject to these rules. At the very least, the approval of the new rules calls into question the human health based criteria mixing zone utilized by EPA and IDEQ in the draft Permit and draft 401 Certification. Additional time is likely needed by Clearwater and the agency to consider appropriate mixing zones under the new rule. Again, this suggests a hold in issuance of the final Permit is appropriate.

Finally, on May 10, 2019, EPA approved the Washington's Human Health Water Quality Criteria and announced the intent to withdraw the federally adopted standards. Since several conditions in Clearwater's Permit are based on EPA's application of its federal standards, adoption of state standards substantially change key permit conditions. This will require a significant update to the current draft Permit. Clearwater requests time to review any updates to the draft permit prior to issuance.

On behalf of Clearwater Paper, we appreciate the opportunity to provide comments and thank you for your consideration. Please contact me at 509-344-6419 or malisa.maynard@clearwaterpaper.com with questions.

Sincerely yours,



Malisa Maynard
Corporate Environmental & Sustainability

Attachment: Clearwater comments to IDEQ on the Draft 401 Certification

cc: Chris Hladick, Region X Administrator
Anna Wildeman, Deputy Assistant Administrator, Office of Water
David Ross, Assistant Administrator for Water
Dan Opalski, Director, Office of Water
Mary Anne Nelson, IDEQ Water Quality Division Administrator
John Cardwell, IDEQ Regional Administrator

Clearwater comments to IDEQ on the Draft 401 Certification



Clearwater Paper Corporation
601 West Riverside, Suite 1100
Spokane, WA 99201

May 28, 2019

Mr. John Cardwell
Regional Administrator
Idaho Department of Environmental Quality
118 F Street
Lewiston, ID 83501

**Subject: DRAFT 401 Water Quality Certification for Clearwater Paper Corporation
Lewiston, ID Facility (Permit #0001163)**

Dear Mr. Cardwell:

Clearwater Paper (Clearwater) appreciates the opportunity to provide comments on IDEQ's draft 401 certification of the subject NPDES Permit. Please consider this letter, Clearwater's letter to EPA on the draft NPDES Permit (attached) and Arcadis' letter (attached) in issuing your final 401 certification.

A. Mixing Zone for Human Health Criteria

The draft 401 water quality certification notes that EPA's draft permit which establishes seasonal limits for pentachlorophenol (Penta) and 2,3,7,8 TCDD based on seasonal harmonic mean flows complies with Idaho water quality standards. In light of EPA's recent approval of Idaho's human health criteria on April 4, 2019 (after IDEQ's publication of the draft 401 certification) it is clear that human health criteria (and associated mixing zones) are based on annual harmonic mean flows and not seasonal harmonic mean flows as set forth in the subject draft NPDES Permit. Accordingly, Clearwater requests that IDEQ's final certification authorizes a mixing zone based on annual harmonic mean flows (estimated as 32,600 CFS) with an effluent discharge of 31 million gallons per day from Clearwater's Mill. Seasonal effluent limits are not appropriate for human health criteria. See attached Arcadis Letter dated May 28, 2019.

In addition to EPA inappropriately utilizing seasonal harmonic mean flows to establish Penta limits, we believe the EPA's assumed default mixing zone of no greater than 25% of the river for human health criteria (which was approved in IDEQ's draft 401 certification) is not appropriate. As set forth in the attached Arcadis letter, a 25% mixing zone is appropriate in most case to protect aquatic biota, however the factors that are utilized to establish human health criteria (long term exposure, fish consumption from

fish caught from the entire river, etc.) substantially vary from the criteria for aquatic life protection. Accordingly, this suggests that a much larger mixing zone for human health criteria is appropriate. In fact, it appears that use of the entire river for a mixing zone would be appropriate (unless site-specific conditions suggest that people are consuming only water from a mixing zone or are catching and consuming fish only from within the mixing zone).

Clearwater recognizes that IDEQ has no established guidance or policy on the appropriate size of a mixing zone for human health criteria. However it is well established that either under IDEQ's current mixing zone policy at IDAPA 58.01.02.060 (which has not yet been approved by EPA) or under IDEQ's prior mixing zone policy (which remains in effect for Clean Water Act purposes), the agency has the discretion to authorize a mixing zone greater than the default 25% of the River based on site specific conditions. Clearwater believes, a larger mixing zone is appropriate human health criteria for the reasons stated in the Arcadis letter.

Even if IDEQ is not inclined to authorize a larger mixing zone for all human health criteria pollutants until the agency formalizes additional guidance around the topic, Clearwater believes a larger mixing zone for Penta is appropriate. IDEQ's mixing zone policy which remains in effect for Clean Water Act purposes provides that "multiple mixing zones can be established for a single discharge, each being specific for one (1) or more pollutants contained within the discharged water". IDAPA 58.01.02.060.01.d (IDEQ 2014). As set forth in the attached letter to EPA, Clearwater believes that there is no data to support EPA's conclusion that Clearwater's discharge has the reasonable potential to exceed Washington human health water quality criteria for Penta. Rather, all data shows that Clearwater's discharge is non-detect for Penta. Moreover, there is nothing in the record to suggest that Penta is currently exceeding either Idaho's or Washington's human health criteria in the Snake River. Thus, EPA's proposed limit is entirely premised upon theoretical (and unsupportable) water quality concerns. One way to address this issue would be for IDEQ to authorize a larger mixing zone for Penta. There is nothing in the record to suggest a larger mixing zone would cause any human health concerns regarding fish consumption or ingestion of drinking water within Idaho or downstream. In fact, EPA's recent approval of Idaho's water quality standards for protection of downstream waters at IDAPA 58.01.02.070.08 provides added support for a larger mixing zone for Penta. Since there is no data to suggest that Washington's Penta criteria is exceeded at the state border or "pour point" as described in Idaho's downstream water provision, a larger mixing zone for Penta is appropriate and will ensure protection of downstream standards.

B. 2,3,7,8 TCDD Effluent Limit

As set forth in more detail in the attached letter to EPA, EPA has imposed a more stringent 2,3,7,8 TCDD effluent limit based on no data and has established seasonal limits for that pollutant. The proposed limits are not consistent with the assumptions in the approved dioxin TMDL for the Snake River. It is believed that IDEQ had input in the development of that TMDL and continues to be involved in implementation of the TMDL. Although not technically a mixing zone question, Clearwater requests that IDEQ

require in its final 401 water quality certification that the 2,3,7,8 effluent limits in Clearwater's draft permit include the TMDL allocation. We also request that IDEQ identify that the proposed seasonal limits are not appropriate and comment that EPA not revise permit limits for Idaho facilities until there are appropriate revisions to the TMDL after consultation with all affected states, including Idaho.

C. Monitoring Plan

EPA has proposed in the draft permit PCB monitoring of Clearwater's effluent and river monitoring utilizing Method 1668C (an unapproved EPA method). As set forth in the attached letter to EPA, Clearwater maintains that the factual, technical and legal bases for imposing such monitoring is lacking. However in light of the fact that IDEQ will soon be taking over Clearwater's NPDES Permit under the IPDES program and recognizing that IDEQ and other agencies may benefit from additional PCB monitoring in the area Clearwater's discharge, Clearwater would be willing to develop a monitoring plan to address these issues in lieu of the PCB monitoring requirements in the draft Permit. Such a monitoring plan would set forth the type of monitoring to be conducted, the laboratory method to be utilized, reporting requirements and agreed protocols on quantifying false positives utilizing Method 1668C monitoring. Accordingly, Clearwater requests that IDEQ notify EPA in the final 401 certification that the state supports a monitoring plan approach to be approved by IDEQ in lieu of the monitoring requirements in the draft Permit.

Clearwater appreciates IDEQ's consideration of these comments and is available to provide any additional information or answer any questions concerning the issues raised in this letter. Please contact me at 509-344-6419 or malisa.maynard@clearwaterpaper.com with questions.

Sincerely yours,



Malisa Maynard
Corporate Environmental & Sustainability

Attachments: Arcadis Letter dated May 28, 2019

Clearwater Paper's May 2019 letter to EPA on the Draft Water Permit

cc: Mary Anne Nelson, IDEQ Water Quality Division Administrator

Arcadis Letter dated May 28, 2019

Mr. Clayton Steele
Environmental Manager
Clearwater Paper Corporation
803 Mill Road
Lewiston, ID 83501

Ms. Malisa Maynard
Corporate Environmental and Sustainability Manager
Clearwater Paper Corporation
601 West Riverside, Suite 1100
Spokane, WA 99201

Arcadis U.S., Inc.
1 Executive Drive
Suite 303
Chelmsford
Massachusetts 01824
Tel 978 937 9999
Fax 978 937 7555
www.arcadis.com

Subject:

General comments on Mixing Zones (and dilution factors) for Human Health Criteria

ENVIRONMENT

Date:

April 24, 2019

Contact:

Paul D. Anderson, Ph.D.

Phone:

977 322 4504

Email:

Paul.Anderson
@arcadis.com

Our ref:

ME000387.0000

Dear Mr. Steele and Ms. Maynard:

This letter briefly reviews the basis for dilution factors applicable to National Pollution Discharge Elimination System (NPDES) permit limits based on human health criteria. This letter was precipitated by review of the human health-based dilution factors presented in the Fact Sheet accompanying the draft NPDES permit issued by the United States Environmental Protection Agency (USEPA) for Clearwater Paper Corporation's (Clearwater's) Mill in Lewiston, Idaho (referred to as the "draft permit" in the remainder of this letter). For the reasons described below, the human health dilution factors presented in the Fact Sheet are inconsistent with the assumptions used to derive human health criteria. Alternate dilution factors consistent with the assumptions used to derive human health criteria can be easily derived and are more appropriate to use when developing permit limits for such criteria.

Ambient water quality criteria derived to protect human health assume long-term continuous exposure. Criteria derived to protect against unacceptable cancer risk assume daily exposure to the receiving water for an entire lifetime. USEPA and most regulatory agencies assume a lifetime is 70 years. Criteria derived to protect against unacceptable non-cancer risk assume a chronic exposure. Toxicologists assume that a chronic exposure represents 10% or more of an organisms' lifetime. Given USEPA's assumption that a human lifetime is 70 years, 10% or more of a lifetime assumes daily exposure to the receiving water for 7 or more years.

Mr. Clayton Steele
Ms. Malisa Maynard
April 24, 2019

Dilution factors based on mixing zones that extends only a few hundred or few thousand feet downstream of a discharge and encompass only a fraction of the receiving water width or flow (e.g., 25%) are inconsistent with the human criteria assumption of long-term exposure. A dilution factor based on such a mixing zone effectively assumes that over the long-term (7 or 70 years) people only catch fish and contact surface water from within the mixing zone and that the fish they catch live only within the mixing zone. In reality, over a 7- or 70-year period, people fish and contact surface water over an area far larger than the above described mixing zone. Additionally, most fish live over a much larger area than the above described mixing zone and are exposed to water concentrations over a much larger area.

Such an approach recognizes that over the course of the duration of exposure assumed by human health criteria, people will be exposed to fish and surface water over a much larger area than just the mixing zone. The fish they catch will also be exposed to surface water over a much larger area than just the mixing zone. The concentration within that larger area will be lower, likely much lower, than occurs within the mixing zone. In fact, the concentration in the entire river best represents the long-term exposures assumed by human health criteria and is more closely represented by the concentration of chemicals in the effluent diluted into the entire river flow (represented by the annual harmonic mean). In the case of Clearwater's Lewiston Mill, such a dilution factor that is more representative of long-term human health exposures is approximately 667. That is equal to the annual harmonic mean river flow of 32,600 cubic feet per second (cfs) divided by the effluent flow of 31.6 million gallons per day or 48.9 cfs.

In closing, I did want to mention that using the entire annual harmonic mean flow of a river when developing NPDES permit limits based on human health criteria is not unusual. When I first started assisted in developing such criteria and NPDES permits limits a few decades ago for dioxin, use of the full river flow was common when developing dilution factors. I also understand that the State of Florida continues to follow the approach of diluting effluent flow into the entire annual harmonic mean flow of a receiving water. Thus, current precedent exists for using the entire flow of a river when developing dilution factors for human health criteria used to establish NPDES permit limits.

If you have any questions or require any additional information, please contact me at 978-322-4504.

Sincerely,
Arcadis U.S., Inc.



Paul D. Anderson, Ph.D.
Senior Vice President, Principal Scientist

Cc: Ben Latham
Danielle Pfeiffer